'97 lineup at Space Center Houston has something for everyone

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close-up at the space program. Professor I.B. Frazzled explores the most frequently asked questions at SCH, "Where's the anti-gravity room?" Developed specifically for school groups, the professor attempts to answer this questions with the help of test subjects.

"Earth Quest: The Challenge Begins," featured through the month of January, takes visitors on an interactive adventure inside a giant video game as they learn how they can make a positive impact on the environment.

In February, SCH's Educational Programs Department will host "Discovery Day." A unique opportunity for students with physical, mental and auditory challenges to participate in a "hands-on" experience. "Careers in Space Week " will be held from Feb.17-21 and will feature guest speakers and briefings on what it takes to be a part of the human space flight program.

SCH will host an International Space Station Educator's conference Feb. 7 and 8. This conference is designed to bring the space station closer to educators through interaction and excitement. The event includes hands-on presentations with interactive components to use in the classroom.

SCH, in cooperation with JSC's Education Team, will sponsor an educator camp-in April 18. Teachers will spend the night at under the stars at Starship Gallery, build rockets and participate in a team night launch.

A new exhibit will be unvield in mid-March. "The Roswell Incident: 50 Years of Fact and Fiction," will highlight myths, methods and actual events with interactive displays that could alter opinions.

Both Boy and Girl Scouts will have an opportunity in 1997 to experience space with group discounts and camp-ins. SCH will conduct a month-long salute to the Boy Scouts of America in February, June and October. Girl Scouts will be honored in April, June and October. Specialist discounts will be available during these months for the troops. In addition, three camp-in will be featured for the scouts. Scouts can test their space skills, earn merit badges and participate in the exploring SCH after the gates close for the night. Three Cub Scout camps will be offered on March 21, April 25 and Sept. 5. Three Boy Scout camps will be held on Feb. 14, May 10 and Nov. 22. There also will be three Girl Scout Camps on Sept. 13, 20 and Oct. 18.

Other camps also are scheduled to take place this year. A spring break camp will be held March 24-28. Summer camps will be held throughout the month of June and July and the first week in August.

Later in the year, "The Robot Zoo" comes to SCH as an interactive three-dimensional exhibit that seeks to explain the magic of nature through engineering. The zoo will feature robotic reproductions of ordinary animals.

A special IMAX premiere will take place on July 4. *Mission to Mir* features footage compiled by astronauts and cosmonauts during shuttle/Mir docking missions.

JSC worker receives top award

NASA Retiree Burton Cour-Palais recently received a distinguished scientist award from the international Hypervelocity Impact Society.

Cour-Palais—the first NASA employee to receive this honor—was recognized for his work on shielding against meteoroids and orbital debris impacts from the Gemini program to the space station. He worked in the Earth Science and Solar System Exploration Division in the Space and Life Sciences Directorate and retired from NASA after 29 years.

Cour-Palais

The award is given to scientists who have made a significant and lasting contribution to the field of hypervelocity science, the study of the effect of collisions at extremely high speeds, and is judged on its importance, scope, service it yields and how it is used currently.

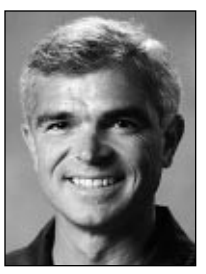
The Hypervelocity Impact Society awards grants for studies through out the world. Its objectives are to foster the development and exchange of technical information in the discipline of impact phenomena by promoting technical excellence, encouraging peer review publications and holding meetings on a regular basis.

Technicians in the Kennedy Space Center Vertical Processing Facility install a replacement Fine Guidance Sensor in the FGS Scientific Instrument Protective Enclosure, a container that will be flown in *Discovery's* payload for installation into the Hubble Space Telescope. STS-82 is scheduled to liftoff Feb. 13 with Commander Ken Bowersox, Pilot Scott Horowitz and Mission Specialists Mark Lee, Steve Hawley, Greg Harbaugh, Steve Smith and Joe Tanner. Lee, Harbaugh, Smith and Tanner will conduct a total of four space walks to service the orbiting telescope.

Clifford joins Boeing space station team

Three-time shuttle veteran Rich Clifford left JSC this week to join Boeing Company as a flight operations manager for the International Space Station Program.

"Rich has been a valuable asset and his contributions will be sorely missed," said David Leestma, director of Flight Crew Operations. "We wish him the best of luck in his new position and look forward to a continuing relationship with him as we move forward with the assembly of the International Space Station."



Clifford

Clifford joined NASA in July 1987 as a space shuttle vehicle integration engineer and was selected as an astronaut in 1990. Clifford flew as a mission specialist on STS-53 in 1992, STS-59 in 1994 and STS-76 in 1996. He has logged 665 hours in space, including a five-hour space walk.

Clifford's first flight on STS-53 carried a Department of Defense payload. He next served aboard *Endeavour* on STS-59, which carried the Space Radar Laboratory, and his final flight was the third docking mission to the Russian Mir Space Station—STS-76.

"I have been extremely fortunate to have worked with such dedicated people at JSC and within NASA for the last nine years," said Clifford. "I will continue my earnest support of human exploration of space in my new position with the Boeing Company."

In his new role, Clifford will be responsible for station operations in conjunction with NASA's Mission Control Center and Flight Crew Operations. He will develop operational concepts for mission support and flight procedures.

Clinic receives accreditation

The Kelsey-Seybold clinic at JSC has been awarded a two-year accreditation by the commission of the College of American Pathologists, or CAP, based on the results of a recent on-site inspection.

The laboratory's director was advised of this national recognition and congratulated for the "excellence of the services being provided." The clinic is one of the more than 5,000 CAP-accredited laboratories nationwide.

The CAP laboratory accreditation program is recognized by the federal government as being equal to or more stringent than the government's own inspection. Inspectors examine records and quality control of the laboratory for the preceding two years, as well as the education and qualifications of the total staff, the adequacy of the facilities, the equipment, laboratory safety and management to determine how well the laboratory is serving the patient.

Volunteers needed for on-line shuttle project with students

By Stephanie Smith

The NASA Learning Technologies Project, a NASA wide K-12 initiative, invites employees to participate in an on-line, education project called Shuttle Team Online.

"Shuttle Team Online is an Internet-based educational outreach program that will share real life experiences of the 'behind-the-scenes' space shuttle team with students and teachers around the world," said Chris Culbert, manager of the Information Technology Office. "The goal is to demonstrate to students the variety of skills and educational backgrounds required to make the shuttle program successful."

The Shuttle Team Online project will reach classrooms via the Internet in the Spring semester of 1997 with a focus on STS-83, the Microgravity Science Lab which is scheduled for a March 20 launch. During this time, Shuttle Team Online will be publicly available in an interactive mode during March, April and May.

"The project will target students in grades 4-12, however, the unique perspective of Shuttle Team Online will certainly be of interest to a much broader group," said Culbert. "Shuttle Team Online will ultimately be a general outreach program to the global community interested in NASA's space program."

Volunteers are needed to share their expertise with students. Volunteers will write brief biographies and "field journals" describing their day-to-day activities. Volunteers also will answer filtered E-mail questions from students. Finally, a limited number of volunteers will be involved in live network events. After the project ends, the question and answer archive will remain available indefinitely.

Shuttle Team Online belongs to a family of successful online education projects such as "Live from Antarctica," "Online From Jupiter, "and many others. Online examples are available at http:// quest.arc.nasa.gov/interactive/

"We're very excited to bring this NASA project to schools in the U.S. and around the world," Culbert said. "We also look forward to working with employees, the people who make it happen."

To volunteer for this project or for more information, contact Frances Harris at x38111 or e-mail at fharris@pt1.jsc.nasa.gov

Blaha prepares for STS-81

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Commander Valery Korzun and Flight Engineer Alexander "Sasha" Kaleri and stowed in the Spacehab module for return to Earth.

In addition to docking with the station, *Atlantis* will carry the KidSat camera into space. During STS-76, KidSat was successful in taking more than 300 images of Earth. KidSat is a NASA-sponsored research project that links middle, high schools and university students to missions. Students remotely operate a camera, mounted in the shuttle, to take digital still photographs of Earth. Middle school students plan the photos by calculating the longitude and latitude, as well as the time the shuttle flies over the region. High school and university students compile the requests into a single file that is forwarded by KidSat representatives at JSC, to the computer connected to the camera. Using special flight software, the computer commands the camera to snap the pictures. Photographs are downloaded into a single archive that students can access using the Internet.

Meanwhile, Blaha continued to prepare for his return to Earth. He packed 11 bags of gear that will be transferred to *Atlantis*. He performed daily checks and direct feeds of the BioTechnology Systems cartilage growth experiment, and checked the Greenhouse facility and its crop of wheat.

With a successful on-time launch *Atlantis* will return to KSC at about 6:57 a.m. CST Jan. 22.

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EOC moves into Phase 2

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training to help them become comfortable with the system. Training will continue to expand and cover several elements of an emergency including the JSC Emergency Response Team and community emergency personnel.

The new dispatch area consists of three workstations. Each workstation has a computer with emergency operations software, four video monitors and a microphone to allow dispatch at the same time a call is being taken.

The key to the EOC is its software technology—primarily commercial-off-the-shelf. The system is based on a dual head 133 MHz Pentium processor and the Windows NT operating system. The workstations run the CAD software from Intergraph and the audio system utilizes Motorola developed software. Since these were commercial products, integration and implementation were straightforward; the only custom code required was that needed to link the packages together.

This move completes Phase 1 of the Emergency Operations Center. Phase 2 will include more extensive training and joint exercises for emergency personnel around JSC and Phase 3 will expand JSC's emergency response role within the community.

"When we complete the EOC, it will be a world-class operation," Anderson said. "We will be top of the line in emergency systems."

NASA-JSC